

CLAIMS

What we claim is:

1. A duplex forming oligonucleotide (DFO) comprising a first region having nucleotide sequence complementary to nucleotide sequence of a target RNA sequence or a portion thereof, and a second region having nucleotide sequence that is an inverted repeat of the nucleotide sequence in said first region, wherein said DFO can assemble into a double stranded oligonucleotide, and wherein the nucleotide sequence of each strand of the double stranded oligonucleotide is identical.
2. The DFO molecule of claim 1, wherein said first region and said second region are separated by a palindrome sequence.
3. The DFO molecule of claim 2, wherein said palindrome is about 2 to about 12 nucleotides in length.
4. The DFO molecule of claim 1, wherein said DFO comprises a 3'-terminal cap moiety.
5. The DFO molecule of claim 4, wherein said terminal cap moiety is an inverted deoxyabasic moiety.
6. The DFO molecule of claim 4, wherein said terminal cap moiety is an inverted deoxynucleotide moiety.
7. The DFO molecule of claim 4, wherein said terminal cap moiety is a dinucleotide moiety.
8. The DFO molecule of claim 7, wherein said dinucleotide is dithymidine (TT).
9. The DFO molecule of claim 1, wherein said DFO molecule comprises a 5'-phosphate group.
10. The DFO molecule of claim 1, wherein said DFO molecule comprises no ribonucleotides.
11. The DFO molecule of claim 1, wherein said DFO molecule comprises ribonucleotides.

12. The DFO molecule of claim 1, wherein said DFO comprises at least about 15 nucleotides that are complementary to the nucleotide sequence in said target RNA or a portion thereof.
13. The DFO molecule of claim 1, wherein said DFO comprises at least about 17 nucleotides that are complementary to the nucleotide sequence in said target RNA or a portion thereof.
14. The DFO molecule of claim 1, wherein said DFO comprises at least about 19 nucleotides that are complementary to the nucleotide sequence in said target RNA or a portion thereof.
15. The DFO molecule of claim 1, wherein any purine nucleotide in said DFO is a 2'-O-methyl pyrimidine nucleotide.
16. The DFO molecule of claim 1, wherein any purine nucleotide in said DFO is a 2'-deoxy purine nucleotide.
17. The DFO molecule of claim 1, wherein any pyrimidine nucleotide in said DFO is a 2'-deoxy-2'-fluoro pyrimidine nucleotide.
18. The DFO molecule of claim 1, wherein said DFO molecule comprises 3'-nucleotide overhangs.
19. The DFO molecule of claim 18, wherein said 3'-overhangs comprise about 1 to about 4 nucleotides.
20. The DFO molecule of claim 19, wherein said nucleotides comprise deoxynucleotides.
21. The DFO molecule of claim 20, wherein said deoxynucleotides are thymidine nucleotides.
22. A pharmaceutical composition comprising the DFO molecule of claim 1 in an acceptable carrier or diluent.